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RAW SEQUENCE LISTING                      DATE: 08/31/2004  
 PATENT APPLICATION: US/10/806,573              TIME: 13:26:28

Input Set : N:\Crif3\RULE60\10806573.raw.txt  
 Output Set: N:\CRF4\08312004\J806573.raw

## SEQUENCE LISTING

3 (1) GENERAL INFORMATION:  
 5     (i) APPLICANT: BLUMENFELD, ANAT; GUSELLA, JAMES F;  
 6                BREAKEYFIELD, XANDRA, O;  
 7                SLAUGENHAUPT, SUSAN  
 9     (ii) TITLE OF INVENTION: USE OF GENETIC MARKERS TO  
 10                DIAGNOSE FAMILIAL DYSAUTONOMIA  
 12     (iii) NUMBER OF SEQUENCES: 34  
 14     (iv) CORRESPONDENCE ADDRESS:  
 15            (A) ADDRESSEE: MORGAN & FINNEGAN, L.L.P.  
 16            (B) STREET: 345 PARK AVENUE  
 17            (C) CITY: NEW YORK  
 18            (D) STATE: NEW YORK  
 19            (E) COUNTRY: USA  
 20            (F) ZIP: 10154  
 22     (v) COMPUTER READABLE FORM:  
 23            (A) MEDIUM TYPE: FLOPPY DISK  
 24            (B) COMPUTER: IBM PC COMPATIBLE  
 25            (C) OPERATING SYSTEM: PC-DOS/MS-DOS  
 26            (D) SOFTWARE: ASCII  
 C--> 28     (vi) CURRENT APPLICATION DATA:  
 C--> 29            (A) APPLICATION NUMBER: US/10/806,573  
 C--> 30            (B) FILING DATE: 22-Mar-2004  
 W--> 38            (C) CLASSIFICATION: 435  
 40     (vii) PRIOR APPLICATION DATA:  
 W--> 34            (A) APPLICATION NUMBER: US/08/480,655  
 35            (B) FILING DATE: 07-JUNE-1995  
 W--> 36            (A) APPLICATION NUMBER: 08/049,678  
 37            (B) FILING DATE: 16-APRIL-1993  
 W--> 41            (A) APPLICATION NUMBER: US/07/890,719  
 42            (B) FILING DATE: 29-MAY-1992  
 44     (viii) ATTORNEY/AGENT INFORMATION:  
 45            (A) NAME: KENNETH H. SONNENFELD  
 46            (B) REGISTRATION NUMBER: 33,285  
 47            (C) REFERENCE/DOCKET NUMBER: 1829-4001US1  
 49     (ix) TELECOMMUNICATION INFORMATION:  
 50            (A) TELEPHONE: 212-451-8513  
 51            (B) TELEFAX: 212-751-6849  
 54 (2) INFORMATION FOR SEQ ID NO: 1:  
 56     (i) SEQUENCE CHARACTERISTICS:  
 57            (A) LENGTH: 20  
 58            (B) TYPE: NUCLEIC ACID  
 67            (C) STRANDEDNESS: SINGLE

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68          (D) TOPOLOGY: UNKNOWN
W--> 70      (ii) MOLECULE TYPE: OLIGONUCLEOTIDE
72      (iii) HYPOTHETICAL: No
74      (ix) FEATURE:
75          (A) NAME/KEY: PRIMER SEQUENCE OF HXB LOCUS
76          (B) LOCATION: CHROMOSOME 9
77          (C) IDENTIFICATION METHOD:
78          (D) OTHER INFORMATION:
80      (x) PUBLICATION INFORMATION:
81          (A) AUTHORS: OZELIUS, L; SCHUBACK, DE;
82 STEFANSSON, K; SLAUGENHAUPT, S;
83 GUSELLA, JF; BREAKEFIELD, XO
84          (B) TITLE: DINUCLEOTIDE REPEAT POLYMORPHISM
85 FOR THE HEXABRACHION GENE (HXB) ON
86 CHROMOSOME 9q32-34
87          (C) JOURNAL: HUMAN MOLECULAR GENETICS
88          (D) VOLUME: 1
89          (E) ISSUE: 2
90          (F) PAGES: 141
91          (G) DATE: 1992
92          (H) DOCUMENT NUMBER:
93          (I) FILING DATE:
94          (J) PUBLICATION DATE:
95          (K) RELEVANT RESIDUES IN SEQ ID NO:
97      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
99 ATAGCCAAAG AGAGGTGCCC                20
102 (2) INFORMATION FOR SEQ ID NO: 2:
104      (i) SEQUENCE CHARACTERISTICS:
105          (A) LENGTH: 20
106          (B) TYPE: NUCLEIC ACID
107          (C) STRANDEDNESS: SINGLE
108          (D) TOPOLOGY: UNKNOWN
W--> 110     (ii) MOLECULE TYPE: OLIGONUCLEOTIDE
112     (iii) HYPOTHETICAL: No
113     (ix) FEATURE:
114         (A) NAME/KEY: PRIMER SEQUENCE OF HXB LOCUS
115         (B) LOCATION: CHROMOSOME 9
116         (C) IDENTIFICATION METHOD:
117         (D) OTHER INFORMATION:
127     (x) PUBLICATION INFORMATION:
128         (A) AUTHORS: OZELIUS, L; SCHUBACK, DE;
129 STEFANSSON, K; SLAUGENHAUPT, S;
130 GUSELLA, JF; BREAKEFIELD, XO
131         (B) TITLE: DINUCLEOTIDE REPEAT POLYMORPHISM FOR
132 THE HEXABRACHION GENE (HXB) ON CHROMOSOME
133 9q32-34
134         (C) JOURNAL: HUMAN MOLECULAR GENETICS
135         (D) VOLUME: 1
136         (E) ISSUE: 2

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137          (F) PAGES: 141
138          (G) DATE: 1992
139          (H) DOCUMENT NUMBER:
140          (I) FILING DATE:
141          (J) PUBLICATION DATE:
142          (K) RELEVANT RESIDUES IN SEQ ID NO:
144      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
146 AGAGCCCTTC TGTCTTTTCC                                20
149 (2) INFORMATION FOR SEQ ID NO: 3:
151      (i) SEQUENCE CHARACTERISTICS:
152          (A) LENGTH: 20
153          (B) TYPE: NUCLEIC ACID
154          (C) STRANDEDNESS: SINGLE
155          (D) TOPOLOGY: UNKNOWN
W--> 157      (ii) MOLECULE TYPE: OLIGONUCLEOTIDE
159      (iii) HYPOTHETICAL: No
161      (ix) FEATURE:
162          (A) NAME/KEY: PRIMER SEQUENCE OF D9S127 LOCUS
163          (B) LOCATION: CHROMOSOME 9
164          (C) IDENTIFICATION METHOD:
165          (D) OTHER INFORMATION:
167      (x) PUBLICATION INFORMATION:
168          (A) AUTHORS: LYALL, JEW; FURLONG, RA;
169 YUILLE, MAR; GOUDIE, DR; LEVERSHA, MA;
170 AFFARA, NA; FERGUSON-SMITH, MA
171          (B) TITLE: A DINUCLEOTIDE REPEAT POLYMORPHISM
172 AT THE D9S127 LOCUS
173          (C) JOURNAL: NUCLEIC ACIDS RESEARCH
174          (D) VOLUME: 20
175          (E) ISSUE: 4
176          (F) PAGES: 925
177          (G) DATE: 1992
178          (H) DOCUMENT NUMBER:
187          (I) FILING DATE:
188          (J) PUBLICATION DATE:
189          (K) RELEVANT RESIDUES IN SEQ ID NO:
191      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
193 CCCTCAAAAT TGCTGTCTAT                                20
196 (2) INFORMATION FOR SEQ ID NO: 4:
198      (i) SEQUENCE CHARACTERISTICS:
199          (A) LENGTH: 23
200          (B) TYPE: NUCLEIC ACID
201          (C) STRANDEDNESS: SINGLE
202          (D) TOPOLOGY: UNKNOWN
W--> 204      (ii) MOLECULE TYPE: OLIGONUCLEOTIDE
206      (iii) HYPOTHETICAL: No
208      (ix) FEATURE:
209          (A) NAME/KEY: PRIMER SEQUENCE OF D9S127 LOCUS
210          (B) LOCATION: CHROMOSOME 9

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211 (C) IDENTIFICATION METHOD:  
 212 (D) OTHER INFORMATION:  
 214 (x) PUBLICATION INFORMATION:  
 215 (A) AUTHORS: LYALL, JEW; FURLONG, RA;  
 216 YUILLE, MAR; GOUDIE, DR; LEVERSHA, MA;  
 217 AFFARA, NA; FERGUSON-SMITH, MA  
 218 (B) TITLE: A DINUCLEOTIDE REPEAT POLYMORPHISM  
 219 AT THE D9S127 LOCUS  
 220 (C) JOURNAL: NUCLEIC ACIDS RESEARCH  
 221 (D) VOLUME:20  
 222 (E) ISSUE:4  
 223 (F) PAGES: 925  
 224 (G) DATE: 1992  
 225 (H) DOCUMENT NUMBER:  
 226 (I) FILING DATE:  
 227 (J) PUBLICATION DATE:  
 228 (K) RELEVANT RESIDUES IN SEQ ID NO:  
 230 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:  
 232 AGATTGATTG ATACAAGGAT TTG 23  
 235 (2) INFORMATION FOR SEQ ID NO: 5:  
 237 (i) SEQUENCE CHARACTERISTICS:  
 238 (A) LENGTH: 20  
 247 (B) TYPE: NUCLEIC ACID  
 248 (C) STRANDEDNESS: SINGLE  
 249 (D) TOPOLOGY: UNKNOWN  
 251 (ii) MOLECULE TYPE: OLIGONUCLEOTIDE  
 253 (iii) HYPOTHETICAL: No  
 255 (ix) FEATURE:  
 256 (A) NAME/KEY:PRIMER SEQUENCE FOR D9S58 LOCUS  
 257 (B) LOCATION: CHROMOSOME 9  
 258 (C) IDENTIFICATION METHOD:  
 259 (D) OTHER INFORMATION:  
 261 (x) PUBLICATION INFORMATION:  
 262 (A) AUTHORS: KWIATKOWSKI, DAVID J;  
 263 HENSKE, ELIZABETH P; WEIMER, KIM;  
 264 OZELIUS, LAURIE; GUSELLA, JAMES J;  
 265 HAINES, JONATHAN  
 266 (B) TITLE: CONSTRUCTION OF A GT POLYMORPHISM  
 267 MAP OF HUMAN 9Q  
 268 (C) JOURNAL: GENOMICS  
 269 (D) VOLUME:12  
 270 (E) ISSUE:  
 271 (F) PAGES: 229-240  
 272 (G) DATE: 1992  
 273 (H) DOCUMENT NUMBER:  
 274 (I) FILING DATE:  
 275 (J) PUBLICATION DATE:  
 276 (K) RELEVANT RESIDUES IN SEQ ID NO:  
 278 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

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Input Set : N:\Crf3\RULE60\10806573.raw.txt

Output Set: N:\CRF4\08312004\J806573.raw

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280 CCTGAGTAGC CGGGACTATA                                20
283 (2) INFORMATION FOR SEQ ID NO: 6:
285     (i) SEQUENCE CHARACTERISTICS:
286         (A) LENGTH: 21
287         (B) TYPE: NUCLEIC ACID
288         (C) STRANDEDNESS: SINGLE
289         (D) TOPOLOGY: UNKNOWN
W--> 291     (ii) MOLECULE TYPE: OLIGONUCLEOTIDE
293     (iii) HYPOTHETICAL: No
295     (ix) FEATURE:
296         (A) NAME/KEY: PRIMER SEQUENCE OF D9S58 LOCUS
297         (B) LOCATION: CHROMOSOME 9
298         (C) IDENTIFICATION METHOD:
307         (D) OTHER INFORMATION:
309     (x) PUBLICATION INFORMATION:
310         (A) AUTHORS: KWIATKOWSKI, DAVID J;
311 HENSKE, ELIZABETH P; WEIMER, KIM;
312 OZELIUS, LAURIE; GUSELLA, JAMES J;
313 HAINES, JONATHAN
314         (B) TITLE: CONSTRUCTION OF A GT POLYMORPHISM
315 MAP OF HUMAN 9Q
316         (C) JOURNAL: GENOMICS
317         (D) VOLUME:12
318         (E) ISSUE:
319         (F) PAGES: 229-240
320         (G) DATE: 1992
321         (H) DOCUMENT NUMBER:
322         (I) FILING DATE:
323         (J) PUBLICATION DATE:
324         (K) RELEVANT RESIDUES IN SEQ ID NO:
326     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
328 TAGGCAACAC ATCAAGATCC T                                21
331 (2) INFORMATION FOR SEQ ID NO: 7:
333     (i) SEQUENCE CHARACTERISTICS:
334         (A) LENGTH: 20
335         (B) TYPE: NUCLEIC ACID
336         (C) STRANDEDNESS: SINGLE
337         (D) TOPOLOGY: UNKNOWN
W--> 339     (ii) MOLECULE TYPE: OLIGONUCLEOTIDE
341     (iii) HYPOTHETICAL: No
343     (ix) FEATURE:
344         (A) NAME/KEY: PRIMER SEQUENCE OF D9S59 LOCUS
345         (B) LOCATION: CHROMOSOME 9
346         (C) IDENTIFICATION METHOD:
347         (D) OTHER INFORMATION:
348     (x) PUBLICATION INFORMATION:
349         (A) AUTHORS: KWIATKOWSKI, DAVID J;
350 HENSKE, ELIZABETH P; WEIMER, KIM;
351 OZELIUS, LAURIE; GUSELLA, JAMES J;

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## VERIFICATION SUMMARY

DATE: 08/31/2004

PATENT APPLICATION: US/10/806,573

TIME: 13:26:29

Input Set : N:\Crif3\RULE60\10806573.raw.txt

Output Set: N:\CRF4\08312004\J806573.raw

L:28 M:220 C: Keyword misspelled or invalid format, [(vi) CURRENT APPLICATION DATA:]  
L:28 M:220 C: Keyword misspelled or invalid format, [(vi) CURRENT APPLICATION DATA:]  
L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]  
L:36 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1)(vii)  
L:38 M:238 W: Alpha Fields not Ordered, Reordered [(C) CLASSIFICATION:] of (1)(vi)  
L:70 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=1  
L:110 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=2  
L:157 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=3  
L:204 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=4  
L:251 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=5  
L:291 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=6  
L:339 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=7  
L:386 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=8  
L:433 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=9  
L:473 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=10  
L:521 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=11  
L:568 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=12  
L:616 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=13  
L:655 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=14  
L:715 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:715 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:703 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=15  
L:760 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:760 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:748 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=16  
L:805 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:805 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:793 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=17  
L:850 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:850 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:830 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=18  
L:875 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=19  
L:921 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=20  
L:980 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:980 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:968 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=21  
L:1017 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:1017 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:1005 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=22  
L:1050 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=23  
L:1097 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=24  
L:1136 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=25  
L:1181 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=26  
L:1226 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=27  
L:1249 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=28  
L:1280 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=29  
L:1303 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=30

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L:1346 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:1346 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:1334 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=31  
L:1391 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:1391 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:1371 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=32  
L:1428 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:1428 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:1416 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=33  
L:1473 M:220 C: Keyword misspelled or invalid format, [(B) MAP POSITION:]  
L:1473 M:238 W: Alpha Fields not Ordered, Reordered [(B) MAP POSITION:] of (2)(viii)  
L:1461 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=34